

D. REMARKS

This amendment has been timely filed within the time limits for reply under the Certificate of Mailing procedure established by 37 C.F.R. § 1.8. Care has been taken to comply with the latest amendment form requirements resulting from changes to 37 C.F.R. 1.121, March, 2003.

Each of the corrections in the text suggested by the Examiner have been implemented by this amendment. As the reference numerals 40 and 51 are clearly referenced now in the amendment, no replacement drawings are deemed necessary. It is believed the item “40” was originally mentioned at page 8 line 3.

Turning now to the Section 103 rejections set forth in paragraph 2 of the Office Action, there are a number of general considerations that apply here. For example, it is well-established that an invention is not considered to be obvious unless the relevant or analogous prior art includes some suggestion as to the necessity of applying the technology in question to solve the problem addressed by the inventor. With respect to obviousness resolution under 35 U.S.C. Section 103, the principles advanced in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) are applicable in the present case. Obviousness should be determined only after considering (1) the scope and content of the prior art, (2) the differences between the claimed invention and the prior art, and (3) the level of ordinary skill in the art. In applying the Deere criteria, recognized tenets of patent law must be employed.

For example, it is well known that the claimed invention must be considered as a whole. And, though the differences between the claimed invention and the prior art may seem slight, *the differences in the claimed invention may be the key to advancement of the art.* *Jones v. Hardy*, 220 USPQ 1021, 1024 (F. Cir. 1984), (emphasis added). The prior art references must be considered as a whole and *they must suggest the desirability* of making the claimed combination if they are to be used as a grounds for an obviousness rejection. *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 488 (Fed. Cir. 1984), (emphasis added).

In short, the scope and content of the prior art excludes a hydrogen generation system that outputs moistened hydrogen gas generated by a reaction with hydroxide solution and metallic or aluminum tubes within a system where liquids are transferred between tanks to start

or stop the reaction. Applicant transfers liquids in the manner described between tanks 1 and 2. Further, applicant's system necessitates the periodic maintenance of the tube tank that is also cleansed at the time of removal of waste 51.

In applying the Deere criteria, recognized tenets of patent law must be employed. In this regard, it is important that the prior art references be viewed without the benefit of hindsight afforded by the claimed invention:

"To imbue one of ordinary skill in the art with knowledge of the invention ... when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. It is difficult but necessary that the decision maker forget what he or she has been taught ... about the claimed invention and cast the mind back to the time the invention was made." *W.L. Gore & associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed Cir 1983).

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

According to MPEP § 706.02(j), the establishment of a prima facie case of obviousness requires the presence of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Here there is no prior art reference that teaches the collection of humidified hydrogen from a tank system that can be recharged and cleaned as claimed.

Secondly, MPEP § 706.02(j) requires that there is a reasonable expectation of success from a combination. No such thing is predicted or realized by the prior art.

MPEP § 706.02(j) also requires that the prior art reference (or references when combined) must *teach or suggest* all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found *in the prior art and not based on applicant's disclosure*. (Emphasis added). See i.e., *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In this case no prior art reference teaches the whole substance of claims 21-23. The cited art does not use tubes arrayed as described. Referencing Claim 23, there is no pertinent reference suggesting the combination of collecting engine exhaust and condensing water from the exhaust and returning water to the reservoir.

A proper obviousness rejection must be logically predicated upon the prior art and must not be based on applicant's disclosure, and here it would appear that a measure of hindsight was employed in the tentative rejections. To support a conclusion that a claimed invention is directed to obvious subject matter, the references must expressly or impliedly suggest the claimed invention. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

MPEP § 2143 is also quite pertinent to this case. Most importantly, it recognizes that a case of obviousness requires that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Again, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.

MPEP § 2143.01 plainly states that "...the prior art must suggest the desirability of the claimed invention." Here we have no such prior art suggesting applicant's tubes, his specific arrangement of vessels, and the engine exhaust condensing/collection steps. Furthermore, the level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int 'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

Regarding combinations of references, the fact that references can be combined or modified does not render the resultant combination obvious *unless the prior art also suggests the desirability of the combination*. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). There is no clear suggestion of the substance of claims 21-23 in the known prior art references. Although a prior art device "may be capable of being modified to run the way the




apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

The Examiner suggests that he claims are within the level of skill in the art. But even if the claimed invention is within the capabilities of one of ordinary skill in the art, that alone *is not sufficient* to establish obviousness. A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made..." because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000).

Accordingly it is believed that the amended claims conform adequately to 35 U. S. C. §112, and that they present novel and non-obvious subject matter per 35 U. S. C. §§ 102 and 103. If any issues remain to be resolved, Applicant's counsel would prefer to resolve them either via email or through a mutually convenient telephone conference. Concluding, this case should be in condition for allowance, and a timely Notice of Allowance is respectfully solicited.


Respectfully submitted,


Stephen D. Carver- Reg. No. 27,314
Suite 800 2024 Arkansas Valley Drive
Little Rock, AR 72212-4147

Customer No. 000051380; email: office@arkpatent.com
Telephone: (501) 224-1500; Facsimile: (501) 224-8831

CERTIFICATE OF MAILING (37 C.F.R. §1.8)

The undersigned attorney hereby certifies that the foregoing Amendment and all appurtenant enclosures, if any, is/are being deposited with the United States postal service, first class postage pre-paid, in an envelope addressed to Commissioner for Patents, MAIL STOP: NON-FEE AMENDMENT, P. O. Box 1450, Alexandria VA 22313-1450 on May 10, 2007.


Stephen D. Carver-Reg. No. 27,314
Customer No. 000051380

L:\office\data7000\7377-ps\7377SUPPAmd.doc